

USSR/General and Specialized Zoology - Insects.

P.

Abs Jour : Ref Zhur - Biol., No 9, 1958, 40044

Author : Rubtsov, I.A.

Inst : -

Title : The Problem of the Biological Method.

Orig Pub : Zashchita rast. ot vredit. i boleznei, 1957, No 3, 23-26.

Abstract : The accomplishments of the biological method of control in foreign lands were reviewed. The organization on an all-around study of entomophagi, the preparation of cadres by the central research institutions, and the outfitting of laboratories with modern equipment, were put forward as the first tasks in this field of protection of plants. It is at present expedient to enlarge the biologic control of pests of subtropical cultures and to conduct experiments in the use of entomophagi for the control of the siberian, pine, annular and gypsy moth silkworm, of pine and red saw flies, and other forest and garden pests. Of great

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USSR/Zooparasitology. Ticks and Insects as Disease Vectors.  
Insects.

G

Abs Jour: Ref Zhur-Biol., No 17, 1958, 77040.

Author : Rubtsov, I.A.

Inst :

Title : On the Criteria of Species in the Small Dipteron  
(Family Simuliidae, Diptera).

Orig Pub: Zool. zh., 1957, 36, No 6, 801-819.

Abstract: The systematic study of the small dipteran is hampered by the extraordinary equality of their external structure. Former methods of determining females according to external signs allow the differentiation not of the species, but only of a group of species. Many earlier descriptions of variable "species" after more detailed study proved to be

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USSR/Zooparasitology. Ticks and Insects as Disease Vectors.  
Insects.

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Abs Jour: Ref Zhur-Diol., No 17, 1958, 77040.

collective species. For differentiating species of the small dipteran, a study of all phases of development, in many cases, is necessary, as well as a comparison of the small structure in detail, using microscopic preparations. The form of the sclerites of the female sexual appendages is a characteristic of great taxonomic importance. Species of the small dipteran differ in all phases according to the quantity of minute details of structure, cycle of development and indication of geographic distribution. Groups of closely related species, very common among Simuliidae, at present are not distinguished; they are now often mixed or

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USSR/Zooparasitology. Ticks and Insects as Disease Vectors.  
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Abs Jour: Ref Zhur-Biol., No 17, 1958, 77040.

mistakenly considered as different genera of a single species. Often it happens that only one of a series of such related species is sanguinous, while sanguinous is not natural to the others. Intra-species morphological variability is different in varicus species and groups of species. Related species inhabiting allied small ponds, not separated by ecological or other barriers, are well distinguished by their structure of sexual appendages, being very similar in all phases of development. So-called related species, separated by such barriers and developing in a different ecological situation, on the other hand, are not distinguished according to structure of the gonapophyses, but are

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USSR/Zooparasitology. Ticks and Insects as Disease Vectors.  
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Abs Jour: Ref Zhur-Diol., No 17, 1958, 77040.

well distinguished according to external characteristics, in particular according to their color and hirsute covering. It is most difficult to distinguish the so-called related species which develop in large rivers (p. Schonbaueria and Titanopteryx). It is therefore practically expedient in such cases to place all these forms in one species.

Card : 4/4

BEY-BIYENKO, G.Ya.; BERIM, N.G.; BRYANTSEV, B.A., BRYANTSEVA, I.B.; VOLGIN, V.I.; DANILEVSKIY, A.S.; ZIMIN, L.S.; KOZHANCHIKOV, I.V.; OSMOLOVSKIY, G.Ye.; RUBTSOV, I.A.; SHEVCHENKO, M.I.; YATSENKO, I.P.; SHCHEGOLEV, V.N., prof., doktor s.-kh.nauk, red.; AKHREMOVICH, M.B., red.; CHUNAYEVA, Z.V., tekhn.red.

[Entomological dictionary and handbook] Slevar'-spravochnik entomologa. Izd.2., perer. i dop. Moskva, Gos.izd-vo sel'khoz. lit-ry, 1958. 631 p. (MIRA 11:12)  
(Entomology--Dictionaries)

RUBTSOV, I.

Conference on Problems in the Biological Control of Pests, Mar.  
19-21, 1957. Ent. oboz. 37 no.1:212-216 '58. (MIRA 11:3)  
(Insects, Injurious and beneficial--Biological control)

RUBTSOV, I.A., doktor biol.nauk

Problems of the biological fight against insects. Vest.AN SSSR  
28 no.12:61-63 D '58. (MIRA 11:12)  
(Insects, injurious and beneficial--Biological control)

RUBTSOV, I.A.

Gonotrophic cycle in bloodsucking black flies [with summary in English]. Paraz. sbor. 18:255-282 '58. (MIRA 12:3)  
(Black flies)

RUBTSOV, I.A.

First International Conference on the Pathology and Biological Control of Insects. Zool zhurn. 38 no. 6:955-957 Je 1959. (MIR. 12:11)

I. Zoological Institute of the Academy of Sciences of the U.S.S.R.,  
Leninigr. d.  
(Insects, Injurious and beneficial--Biological control)

RUBTSOV, I.A.

Second colloquium on insect pathology of the International Committee  
for Biological Pest Control. Ent. oboz. 38 no.3:703-708 '59.  
(MIRA 13:1)

1.Zoologicheskiy institut AN SSSR, Leningrad.  
(Insects, Injurious and beneficial--Biological control)

17(3), 17(10)

AUTHOR:

Rubtsov, I. A., Doctor of Biology

SOV/30-58-12-15/46

TITLE:

Problems in the Biological Extermination of Insects (Voprosy biologicheskoy bor'by s nasekomymi)

PERIODICAL:

Vestnik Akademii nauk SSSR, 1958, Nr 12, pp 61 - 63 (USSR)

ABSTRACT:

The first international conference on insect pathology called by the Czechoslovakian Academy of Sciences was held in Prague from August 13 to 18, 1958. It was attended by delegates from 17 countries. The principal objective of the conference was to discuss important scientific problems, prospects of the development and the arrangement of the organisation of international collaboration in the field of insect pathology research, the investigation and the utilization of entomophages for biologic insect extermination. About 70 reports were submitted. Among others, the following lectures were held:

Ye. V. Talalayev, O. I. Shvetsova, V. N. Poltev (all USSR), J. Kudler, O. Lysenko, I. Vankova (all Czechoslovakia) and others, on results of the study and application of bacteria against various insects.

N. A. Telenga, A. A. Yevlakhova (both USSR) on attempts to use

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Problems in the Biological Extermination of Insects

SOV/30-58-12-15/46

fungi in biological insect extermination.

S. Gershenson (USSR) on the latent existence of virus in insects and possibilities of their activation.

L. Vasiljevic (Yugoslavia), J. Veber (Czechoslovakia), O. I. Shvetsova (USSR), L. Smidt (Yugoslavia) on the character of virus cattle epidemics.

J. Veyzer (Czechoslovakia) on the practical use of micro-spores for biologic suppression methods and on the importance of helminths used as biologic indicators and entomophages.

Z. Boucek, J. Veyzer, M. Hodek, L. Masner (all Czechoslovakia), N. A. Telenga (USSR) on the systematization of entomophages.

A. Huba (Czechoslovakia), W. Keler (Poland), V. A.

Shchepetil'nikova (USSR) on introduction and acclimatization.

It was decided to establish a close collaboration between different countries in the field of the extermination of pernicious insects and to investigate the possibility of establishing a correspondingly unified international organization.

Card 2/2

RUBTSOV, I.A.

Hemolymph and its functions in the black flies (Diptera, Simuliidae). Ent. oboz. 38 no.1:32-57 '59. (MIRA 12:4)

1. Zoologicheskiy institut AN SSSR, Leningrad.  
(Black flies) (Hemolymph)

RUBTSOV, I.A.

First International Conference on Insect Pathology and Biological  
Control in Prague. Mnt. oboz. 38 no.1:262-264 '59.  
(MIRA 12:4)  
(Prague--Entomology--Congresses)  
(Insects, Injurious and beneficial--Biological control)

RUBTSOV, Ivan A.

"Conditions of Environment and Bloodthirstiness of Blackflies (Simuliidae:Diptera)

report presented at the Intl. Congress of Entomology, Vienna, Austria,  
17-25 August 1960.

"APPROVED FOR RELEASE: 08/22/2000

CIA-RDP86-00513R001445820020-5

RUBTSOV, I. A.

"Developmental cycles and blood-sucking requirements."

report submitted for 12th Intl Cong of Entomology, London, 8-16 Jul 64.

APPROVED FOR RELEASE: 08/22/2000

CIA-RDP86-00513R001445820020-5"

ACC NR: AP6030028

SOURCE CODE: UR/0020/66/169/005/1236/1238

AUTHOR: Rubtsov, I. A.

ORG: Zoology Institute, Academy of Sciences SSSR (Zoologicheskiy institut Akademii nauk SSSR)

TITLE: A new fly parasite species and errors in host instinct

SOURCE: AN SSSR. Doklady, v. 169, no. 5, 1966, 1236-1238

TOPIC TAGS: disease vector, animal parasite, host parasite relationship, parasitology

ABSTRACT: Morphology of *Mesomeris brevis* sp., a new parasite of simulidae, is described. Its host is *Prosimulium isos* Rubz., which it penetrates before the eggs hatch. It feeds on the hemolymph and causes observable changes in fat bodies and pupal and imagal cells. Adult flies pick up the eggs of the parasite upon alighting where the eggs have been laid. [WA-50; CBE No. 12]

SUB CODE: 06/ SUBM DATE: 23Dec66/ ORIG REF: 002/ OTH REF: 002/

UDC: 595.132.3+391.557

Card 1/1

RUBTSOV, I.A.

Additions to the fauna of black flies (Diptera, Simuliidae) of  
the palaearctic region. Ent. oboz. 44 no.3:649-651 '65.  
(MIRA 18:9)

1. Zoologicheskiy institut AN SSSR, Leningrad.

RUBTSOV, I.A.; YEVLAKHOVA, A.A.

Reviews and bibliography. Ent. oboz. 44 no.3:717-719 '65.  
(MIRA 18:9)

RUBTSOV, I.A., doktor biolog. nauk

Biological methods of controlling agricultural and forest pests;  
symposium in Novosibirsk. Vest. AN SSSR 35 no.2:118-119 P '65.  
(MIRA 18:3)

RUDTSOV, I.A.

New species of blackflies of the genus *Grenlera* Dobyn et David  
(family Simuliidae). Izv. Komi fil. Geog. ob-va SSSR no.9:97-99  
'64. (MIRA 18:5)

RUBTSOV, I., polkovnik

Analyzing the causes of prerequisites. Av. 1 Kosm. 47 no.128  
(MIRA 18:1)  
50-55 D '64

RUBTSOV, I.A.

Acclimatization of the new parasites of soft scale insects.  
Zashch. rast. ot vred. i bol. 8 no.10:58 O '63. (MIRA 17:6)

1. Zoologicheskiy institut AN SSSR, Leningrad.

RUBTSOV, I.A.

Mode and duration of migrations of the larvae of black flies  
(Diptera, Simuliidae). Fnt. cbaz. 43 no. 1:52-66 '64  
(MIRA 17:6)

I. Zoologicheskiy institut Akademii nauk SSSR, Leningrad.

RUBTZOV, I.A.

Mermithids parasitizing in blackflies. Zool. zhur. 42 no.12  
(MIRA 1787)  
1768-1784 '63

1. Zoological Institute, Academy of Sciences of the U.S.S.R.,  
Leningrad.

RUBTSOV, I.A.

A conference of entomologists at the World Health Organization  
held in Geneva on Oct. 20-Nov. 3, 1962. Ent. oboz. 42 no.1:  
244-245 '63. (MIRA 16:8)  
(Entomology--Congresses)

RUBTSOV, I.A.

"Black flies of Karelia and Murmansk Province (Diptera,  
Simuliidae)" by Z.V. Usova. Reviewed by I.A. Rubtsov.  
Ent. oboz. 41 no.2:482-484 '62. (MIRA 15:11)  
(Karelia—Black flies)  
(Murmansk Province—Black flies)  
(Usova, Z.V.)

RUBTSOV, I.A.

"The principles of biological control; interrelation of hosts and  
pests and utilization in regulation of animal and plant populations"  
by H.L. Sweetman. Reviewed by I.A. Rubtsov. Ent. obozr. 41  
no. 3:717-720 (62).

(Insects, Injurious and beneficial—Biological control)  
(Sweetman, H.L.)

(MIRA 15:10)

RUBTSOV, I. A.

Criteria of allopatric species of bloodsucking black flies  
of the group *Odagmia ornata* (Mg.) (Diptera, Simuliidae).  
Ent. oboz. 41 no.4:901-920 '62. (MIRA 16:1)

1. Zoologicheskiy institut AN SSSR, Leningrad.

RUBTSOV, I.A.

Genera of black flies (family Simuliidae) of the Ethiopian  
region. Zool. zhur. 41 no.10:1488-1502 O '62. (MIRA 15:12)

I. Zoological Institute, Academy of Sciences of the U.S.S.R.,  
Leningrad. (Ethiopia--Black flies)

ZAPESOCHNAYA, G. G.; LESHCHINER, A. S.; SHCHEDRINA, M. M.; ~~KUPTSOV, I. A.~~; PREOBRAZHENSKIY, N. A.

Lipides. Part 15: Synthesis of some triglycerides from cocoa butter. Zhur. ob. khim. 32 no.12:3901-3906 D '62.  
(MIRA 16:1)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M. V. Lomonosova.

(Glycerides) (Cacao butter)

RUBTSOV, I.A.

Biological prerequisites for the control of blackflies in Siberia.  
Zool. zhur. 42 no.1:11-19 '63. (MIRA 16:5)

1. Institut of Zoology, U.S.S.R. Academy of Sciences, Leningrad.  
(Siberia--Black flies--Extermination)

RUBTSOV, I.A., doktor biolog.nauk

Intrahabitat spreading of Entomophaga. Zashch.rast.ot vred.i bol.  
4 no.6:35-37 N-D '59. (MIRA 15:11)

1. Zoologicheskiy institut AN SSSR.  
(Insects, Injurious and beneficial--Biological control)

RUBTSOV, I.A., doktor biolog.nauk, prof.

Combine rationally the biological and chemical methods. Zashch.  
rast.ot vred. i bol. 7 no.4:20-21 Ap '62. (MIRA 15:12)

1. Zoologicheskiy institut AN SSSR.  
(Insects, Injurious and beneficial—Control)

RUBTSOV, Iyan Antonovich; PAVLOVSKIY, Ye.N., akademik, glavnnyy red.;  
STRELKOV, A.A., red.toma; BYKHOVSKIY, B.Ye., red.; GROMOV, I.M.,  
red.; MONCHADSKIY, A.S., red.; SKARLATO, O.A., red.; SHTAKEL'BERG,  
A.A., red.; BORISOV, K.A., red.izd.; SMIRNOVA, A.V., tekhn.red.

[Concise classification key of the bloodsucking black flies of the  
U.S.S.R.] Kratkii opredelitel' krovososushchikh moshek fauny SSSR.  
Moskva, Izd-vo Akad.nauk SSSR, 1962. 227 p. (Opredeliteli po  
faune SSSR, no.77). (MIRA 15:8)

1. Direktor Zoologicheskogo instituta AN SSSR (for Pavlovskiy).  
(Black flies)

RUBTSOV, I.A.

"Transactions of the First International Conference of Insect Pathology and Biological Control". Ent. oboz. 40 no.1:246-250  
'61. (MIRA 14:4)  
(Insects, Injurious and beneficial--Biological control)

DZHAFAROV, Sh.M.; ASADOV, S.M., red.; ALEKPEROV, A.M., red.;  
DERZHAVIN, A.N., red.; KASIMOV, G.B., red.; RUSANOVA, V.N.,  
red.; RUBTSOV, I.A., prof., red.; VARUNTSYAN, I., red. izd-  
va; AGAYEVA, Sh., tekhn. red.

[Fauna of Azerbaijan] Fauna Azerbaidzhana. Baku, Izd-vo Akad.  
nauk Azerbaidzhanskoi SSR. Vol.5. no.1. [Diptera. Black flies  
(Simuliidae)] Dvukrylye nasekomye. Moshki (sem. Simuliidae).  
1960. 154 p. (MIRA 15:2)

(Azerbaijan--Black flies)

RUBTSOV, I.A.

Sympatric black fly species of the group *Eusimulium latipes* (Mg.)  
and their developmental cycle. Zool. zhur. 40 no. 2:222-223  
F '61. (MIRA 14:2)

1. Zoological Institute, U.S.S.R. Academy of Sciences)

RUBTSOV, I.A.; BALYAKINA, M.V.; ZHDANOVICH, Ye.S.

Obtaining 4-methyl-5- $\beta$ -oxyethylthiazole. Trudy VNIVI 6:27-28  
'59. (MIRA 13:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy vitaminnyy institut.  
Sinteticheskaya laboratoriya.  
(THIAZOLE)

RUBTSOV, I.A.

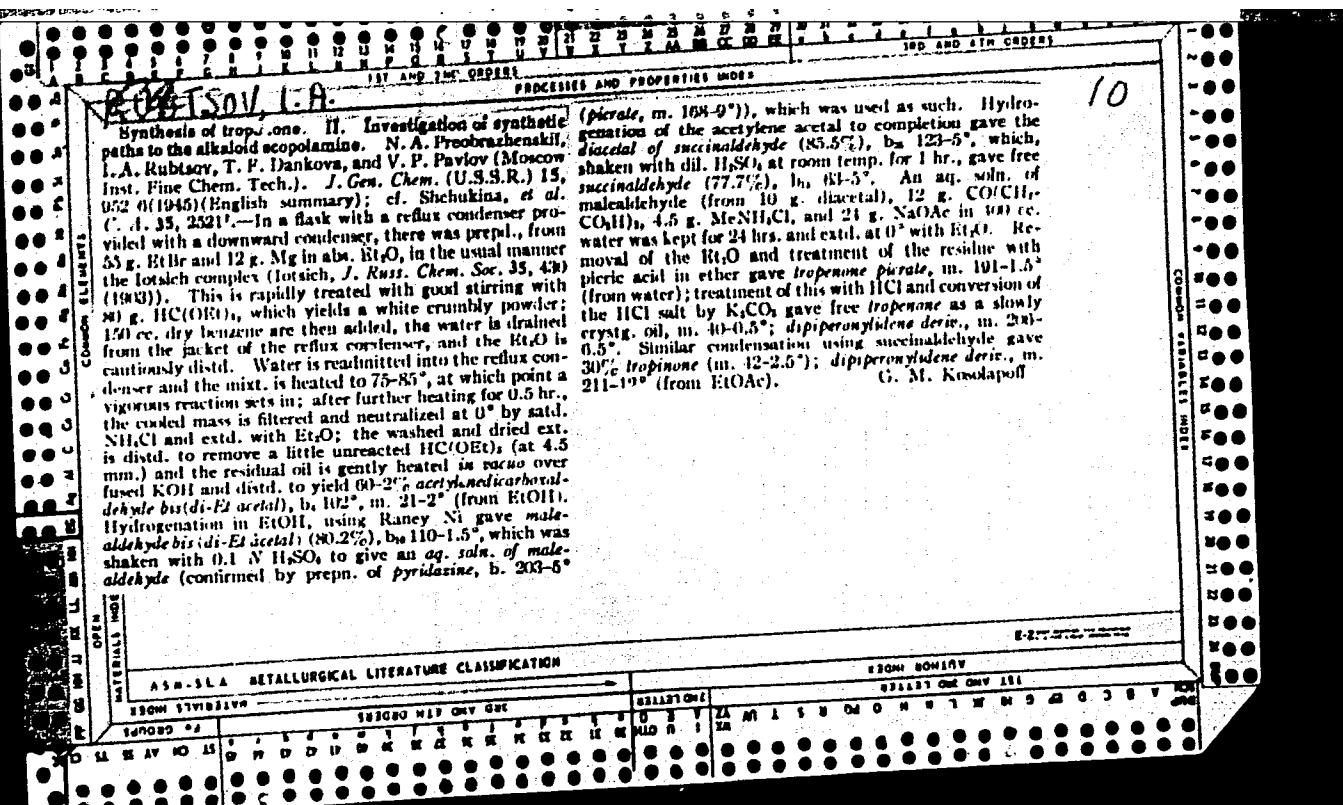
Gonotrophic cycle in phytophagous species of black flies (Diptera, Simuliidae). Ent. oboz. 39 no.3:556-573 '60. (MIRA 13:9)

1. Zoologicheskiy institut Akademii nauk SSSR, Leningrad.  
(Black flies) (Insects—Development)  
(Generative organs)

RUBTSOV, I.A.

Variability and selection of entomophages. Zool. zhur. 39 no.5:641-  
654 My '60. (MIRA 13:10)

1. Zoological Institute, U.S.S.R. Academy of Science, Leningrad.  
(Parasites—Insects)



RUBTSOV, I.A.  
CA

**Synthesis in the field of vitamin A. III. Synthesis of *d*-linalyldeneacetraldehyde.** N. A. Presobrazhenski and I. A. Rukisov, *Zhur. Obshchey Khim.* (J. Gen. Chem.) 18, 1719-23 (1948); cf. *C.A.* 40, 1703f.—Although *d*-linalyldeneacetraldehyde is regarded as a key to vitamin A synthesis, its prepn. has not been realized until the present. 11.5 g. *d*-ionone in 20 ml. EtOH, after 2 days standing at room temp., the solid mixt. with NH<sub>4</sub>Cl gave a brown oil of *3-methyl-1-(2,2,6-trimethyl-6-oxohexyl)-5-thoxy-1-penten-4-yn-3-ol* (I) (18.8 g.), which was undistillable; Zeravitomin active-HI dextrin gave 77.3% of the theoretical H. This (7 g.) stirred 2.5 hrs. with 100 ml. 10% HCl at room temp., then 2.5 hrs. at 50°, gave in 158-61%,  $\eta_D^{25}$  0.9880,  $\eta_D^{25}$  1.5186. 1 with 1 mole H and Pd-CaCO<sub>3</sub> in EtOH gave *3-methyl-1-(2,2,6-trimethyl-6-oxohexyl-1-yl)-5-thoxy-1-pentadien-3-ol*, b.p. 138-40°,  $\eta_D^{25}$  0.9578,  $\eta_D^{25}$  1.4042 (in N). This (15 g.) heated 9 hrs. with 80 ml. 10% HCl on a steam bath in H, extd. with Et<sub>2</sub>O, and the ext. concd. gave 2.9 g. brown, undistillable oil giving a pos. aldehyde test. The 2,4-dinitrophenyl-hydrazine, m. 179-80° (decomp.; from EtOH), on analysis checked the expected compn. for the dextr. of *d*-ionone-acetraldehyde. G. M. Kosolapoff

G. M. Kosolapoff

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PA 30/4979

RUBTSOV, I. A.

Sep 48

USSR/Chemistry - Synthesis  
Chemistry - Hydrolytic Reaction

\*Synthetic Reactions by Means of Ethoxyacetylenemagnesium Bromide." M. N. Shchukina, I. A. Rubtsov, All-Union Chem. Phys. Soc. Res. Inst. "imeni S. Ordzhonikidze", Moscow Inst. Fine Chem. Tech. Izdani M. V. Lomonosov, 8 pp.

"Zhur. Obshch. Khimi" Vol. XVIII, No 9

Condensation of ethoxyethynylmagnesium bromide with acetone, acetophenone and 3-buten-2-OH gave the corresponding tertiary alkoxethynylcarbinols. The latter yield esters of  $\beta$ -oxyacids or  $\alpha$ ,  $\beta$ -unsaturated acids when treated with dilute acids. Hydrogenation first gives  $\beta$ -ethoxyvinylcarbinols (I) and later

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## USSR/Chemistry - Synthesis (Contd.)

saturated  $\beta$ -ethoxyalcohols. Hydrolysis of (I) gives  $\beta$ -oxyaldehydes or  $\alpha$ ,  $\beta$ -unsaturated aldehydes. Submitted 19 May 47.

30/4979

RUBTSOV, I. A.

5

The pyrimidine component of vitamin B<sub>1</sub>, I. A. Rubtsov, M. V. Balyakina, E. V. Zaitseva, and N. A. Preobrazhenskii, Trudy, Vsesoyus. Nauch.-Issledovatel. Vitamin Inst., 19, 20-3 (1963).—Three new modifications of the synthesis of the pyrimidine component of vitamin B<sub>1</sub> are presented: (1) synthesis of 2-methyl-4-amino-5-cyano pyrimidine, (I) from ArOCH<sub>2</sub>C(CN)<sub>2</sub>, (II), or (3) from EtOCH<sub>2</sub>C(CN)<sub>2</sub> (III) by the condensation with acetanilidium (IV); and (2) synthesis of 2-methyl-4-amino-5-carbethoxy pyrimidine (V) from H<sub>2</sub>NCH<sub>2</sub>C(CN)CO<sub>2</sub>Et (VI) and MeCSNH<sub>2</sub> (VII). V is also readily obtained by condensation of EtOCH<sub>2</sub>C(CN)CO<sub>2</sub>Et (VIII) with IV. CH<sub>2</sub>(CN)<sub>2</sub> (IX) condenses readily with esters of formic acid in the presence of K or Na alcoholates, forming 90% HOCH<sub>2</sub>C(CN)<sub>2</sub> (X), non-hydrolyzable by H<sub>2</sub>O<sub>2</sub>, neutral reaction in H<sub>2</sub>O. X and IV-HCl form an addnl. compd., X-IV, m. 63-5° (decompn.). With AcCl, X formed II, a heavy oil, readily turning brown on standing, b.p. 102-4°, n<sub>D</sub><sup>20</sup> 1.4818, d<sub>4</sub><sup>20</sup> 1.1835, requiring 2 moles alkali for titration. The pyrimidine component of vitamin B<sub>1</sub> is more readily synthesized by I, since VII is obtained more easily than IV. The intermediate product VIII reacts quantitatively with aq. NH<sub>3</sub> solns, forming VI, m. 140-2°; by treating VI with LiAlH<sub>4</sub> in Et<sub>2</sub>O, 2-methyl-4-amino-5-hydroxymethyl pyrimidine is obtained (57-80%), which can be used further for the synthesis of vitamin B<sub>1</sub>. E. Wierbicki

RUBTSOV, I. A.

Reaction of acrylonitrile with esters of formic and oxalic

acids. I. A. Rubtsov, M. V. Balyakina, E. S. Zhdanovich, and N. N. Fedorachevskii. Trudy, Vsesoyuz. Nauch.-Issledovat. Vitamin. Inst. A, 23, 6 (1953).—The condensation of acrylonitrile (I) with  $\text{HCO}_2\text{R}$  (II) and  $(\text{CO}_2\text{R})_2$  catalyzed with  $\text{R}'\text{ONa}$  (III) are described and mechanisms proposed. Thus were prep'd. from I, II, and III the following  $\text{ROCH}_2\text{C}(\text{:CHONa})\text{CN}$  ( $\text{R}, \text{R}' = \%$  yield; and  $b_2$  of acetate given): Me, Me, 61.7, 102-8°/5 min.; Et, Et, 58.0, 103-5°; MeCH<sub>2</sub>, MeCH<sub>2</sub>, 53.7, 103-10°; MeCHCH<sub>3</sub>, MeCHCH<sub>3</sub>, 53, 116-18°; iso-Am, iso-Am, —, 118-20°; iso-Am, Me, —, 93-126°; iso-Am, Et, —, 103-10°; Et, MeCHC(=O)Et, —, 107-10°; Me, iso-Am, —, 103-14°/5 min.; Et, iso-Am, —, 103-8°. Similarly the condensation of I with  $(\text{CO}_2\text{Me})_2$  catalyzed by MeONa gave 37.8% of  $\text{MeCH}_2\text{C}(\text{CN})\text{C}(\text{ONa})\text{CO}_2\text{Me}$ ; red-brown substance, forming with AcCl,  $\text{MeCH}_2\text{CCCN}\text{C}(\text{OAc})\text{CO}_2\text{Me}$ ; oil,  $b_2$  135-40°. B. Wiericki

Rubtsov, I.A.

✓ Synthesis of thiamine chloride hydrochloride (vitamin B<sub>1</sub>). I. A. Rubtsov, M. V. Duiakina, E. S. Zhdanovich, and N. K. Preobrazhenskii. *Trudy Vsesoyuz. Nauch.-Issledovat. Vitamin. Inst.*, 5, 10-12 (1954); cf. C.A. 50, 4156e. 2-Methyl-4-amino-5-chloromethylpyrimidine was formed in 90-3% yield, m. 212-13°, by treatment of the corresponding hydroxy- or alkoxymethylpyrimidine with HCl. Condensation of 4-methyl-5-(2-hydroxyethyl)thiazole with 2-methyl-4-amino-5-(chloro or bromo)methylpyrimidine was examined in various solvents. The best results were obtained with the 5-bromomethyl deriv. which gave 55.4% thiamine bromide hydrobromide when the condensation was run 0.5 hr. in refluxing CHBr<sub>3</sub> or R(OCH<sub>2</sub>)<sub>2</sub>C<sub>6</sub>H<sub>5</sub>CN; in iso-BuCN the yield was 51.5%; in dioxane 43.8%, and in HCO-

CH<sub>2</sub>CH<sub>2</sub>CHMe<sub>2</sub> 52.3%. The chloromethyl deriv. gave 36-9% yield. It was shown that the thiazole component was partly consumed in the blinding of the resulting HX from the reaction. G. M. Kosolapoff

RUBTSOV, I.A.; BALYAKINA, M.V.; GRYZLOVA, L.G.; ZHDANOVICH, Ye.S.;  
PREOBRAZHENSKIY, N.A.

Oxidation of diacetone-*l*-sorbose by sodium hypochlorite into  
diacetone-2-keto-*l*-gulonic acid. Trudy VNIIVI 5:17-21 '54.  
(MLRA 9:3)

1. Sinteticheskaya laboratoriya.  
(GULONIC ACID) (SORBOSE)

"APPROVED FOR RELEASE: 08/22/2000

CIA-RDP86-00513R001445820020-5



APPROVED FOR RELEASE: 08/22/2000

CIA-RDP86-00513R001445820020-5"

BEER, Aleksey Aleskeyevich; RUBTSOV, Ivan Andrianovich; NAZAROV, I.N.,  
akademik, retsenzent; PREOBRAZHENSKIY, N.A., professor, retsenzent;  
BUKIN, V.N., professor, spetsredaktor; PRITYKINA, L.A., redaktor;  
GOTLIB, E.M., tekhnicheskij redaktor

[Synthesis of vitamins] Sintez vitaminov. Moskva, Pishchepromizdat,  
1956. 258 p.  
(VITAMINS)

Nov 15 1987  
Diacetone-L-sorbose. I. A. Rubtsov, M. V. Balykina,  
E. M. Polik, R. I. Filippovich, K. V. Lipets, A. P. Nechayev  
and N. A. Borkelman. U.S. S.R. 106,842, Aug. 25, 1957.  
Diacetone-L-sorbose is oxidized to diacetone-2-oxo-L-gulonic  
acid in a continuous process with NaOCl using NiO as  
catalyst.

8  
4E3d  
4E4

RB //

ACC NR: AP6031300

SOURCE CODE: UR/0366/66/002/009/1589/1593

AUTHOR: Batkibekova, M.; Rubtsov, I. A.; Zotchik, N. V.

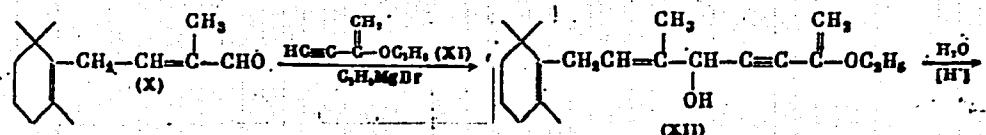
ORG: Moscow Technological Institute of the Food Industry (Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti)

**TITLE:** Synthesis of 1-(2',2',6'-trimethyl-1'-cyclohexen-1'-yl)-3-methyl-1,3-octadien-5-yn-7-one and  $\gamma$ -alkoxyvinylacetylene

SOURCE: Zhurnal organicheskoy khimii, v. 2, no. 9, 1966, 1589-1593

**TOPIC TAGS:** acetylene compound, ketone

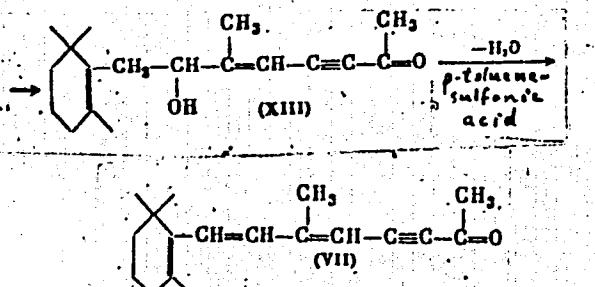
**ABSTRACT:** The compound 1-(2',2',6'-trimethyl-cyclohexen-1'-yl)-3-methyl-1,3-octadien-5-yn-7-one (VII), which forms the basis of the synthesis of a vitamin-A acid free of retroionolide isomers, was synthesized by condensing  $\gamma$ -(2,2,6-trimethyl-1-cyclohexen-1-yl)- $\alpha$ -methylcrotonaldehyde (X) with  $\gamma$ -ethoxyvinylacetylene (XI) under conditions of a Grignard reaction followed by isomerization, saponification, and dehydration of the condensation product (XII):



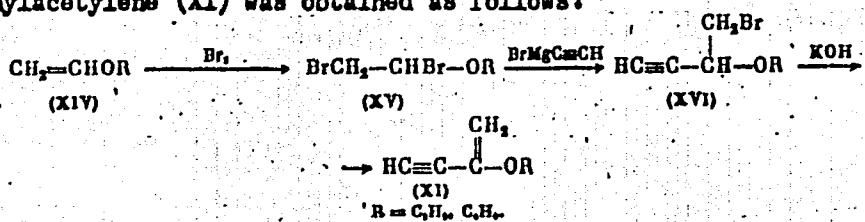
Card 1/2

UDC: 547.592.2+547.374

**ACC NR: AP6031300**



$\gamma$ -Alkoxyvinylacetylene (XI) was obtained as follows:



SUB CODE: 07/ SUBM DATE: 04Oct65/ ORIG REF: 002/ OTH REF: 006

Card 2/2

KLABUNOVSKIY, Ye.I.; ANTIK, L.V.; RUBTSOV, I.A.; SMIRNOVA, M.G.

Example of a catalytic asymmetric synthesis in the series of  
bicyclic compounds. Izv. AN SSSR Ser.khim. no.10:1881 O '63.  
(MIRA 17:3)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

RUBTSOV, I.A., doktor biolog.nauk

Coordinating Conference on Biological Methods of Pest Control and  
Plant Diseases held at Leningrad. Vest. AN SSSR 34 no.3:129-130  
Mr '64. (MIRA 17:4)

RUBTSOV, I.A.

"Modern problems in entomology"; collection of articles translated from English. Vol.1. Reviewed by I.A.Rubtsov. Ent. oboz. 39 no.2:494-498 '60. (MIRA 13:9)  
(Entomology)

RUBTSOV, I.A.

"International Symposium on Injurious Synanthropic Flies";  
Journal of Applied Zoology, vol.46, no.3 1959. Ent. oboz.  
39 no.2:501-503 '60. (MIRA 13:9)  
(Insects, Injurious and beneficial--Congresses)  
(Diptera)

"APPROVED FOR RELEASE: 08/22/2000

CIA-RDP86-00513R001445820020-5

RUBTSOV, I.F., podpolkovnik

Prerequisites engendered by carelessness. Vest.Vozd.Fl. no.8:  
59-60 Ag '61. (MIRA 14:8)  
(Airplanes, Military—Accidents)

APPROVED FOR RELEASE: 08/22/2000

CIA-RDP86-00513R001445820020-5"

RUBTSOV, I.F., podpolkovnik

Not only a record. Vest.Vozd.FI. no.2:48-51 F '61.

(MIRA 14:7)

(Flight training)

RUBTSOV, I.G.

Freezing of the soil and losses of spring runoff. Trudy  
UkrNIGMI no.50:56-59 '65. (MIRA 18:11)

LUTSKIY, Ya.Z.; RUBTSOV, I.K.

Grass meal is loaded with vitamins. Zemledelie 25 no.12:31-34 D  
'63. (MIRA 17:4)

ACC NR: AP6026316

(A,N) SOURCE CODE: UR/0407/65/000/003/0003/0018

AUTHOR: Rubtsov, I. N. (Moscow)

ORG: none

TITLE: Electrosparck machining of semiconductor materials

SOURCE: Elektronnaya obrabotka materialov, no. 3, 1965, 3-18

TOPIC TAGS: <sup>semiconducting material</sup> electrospark machining, semiconductor / ZhK.94.10 electrospark machine

ABSTRACT: These features distinguish the electrospark machining of semiconductors from that of metals: (1) Much higher — by several orders of magnitude resistivity of semiconductors which causes higher heat losses and requires higher voltages for machining semiconductors; (2) The nature of semiconductor conductance particularly in p-type materials; (3) Energy barriers at the metal-semiconductor boundary or internal (in laminated semiconductors) p-n junctions which require application of proper polarity or special measures. Often a thin (0.1—0.5 μ) non-conducting film of SiO<sub>2</sub> hampers the electrospark machining; this difficulty is overcome by using bipolar r-f pulses (up to 1.5 Mc) of different shapes but equal energies. The productivity of electrospark machining of Ge, Si, GaAs, GaSb with a

Card 1/2

ACC NR: AP6026316

thin moving Ni-wire electrode is reported. Two media were used: commercial kerosine and deionized water (1 Mohm/cm). A special oscillator or a medical 1650-kc oscillator with a 100-cps AM was employed. The vertical wire electrode was fed at 100 mm/min. The productivity ranged from 0.2 to 24 mm<sup>2</sup>/min depending on the above variables. In another series of tests, these metals for electrode wire were tried: Ni, W, Cu, Mo; Ni showed the best results. A pneumatic (suck-in) stage was used for holding the specimens during machining. A new ZhK.94.10 electrospark machine intended for machining Ge crystals permits working with one or two 0.03-0.06-mm wire electrodes; the machine is equipped with a depth relay which permits controlling the cut down to 0.45 mm deep. The electrical circuit of the machine is explained as well as the reducer-and-microfeed unit. Operation of the new machine is described. A number of microphotographs of Ge and Si surfaces machined by the electrospark method are shown. Orig. art. has: 13 figures, 1 formula, and 4 tables.

SUB CODE: 13, 09 / SUBM DATE: none / ORIG REF: 002 / OTH REF: 003

Card 2/2

KRASKINA, N.A.; ALLILUYEV, A.P.; RUBTSOV, I.V.; MODYAYEVA, N.S.

Passive hemagglutination reaction with chemical preparations of O and Vi-antigens to *Salmonella typhi* in the diagnosis of typhoid fever and carrier state. *Zhur.mikrobiol., epid. i immun.* 42 no.4: 116-121 Ap '65. (MIRA 18:5)

1. Moskovskiy institut epidemiologii i mikrobiologii i I Moskovskiy ordena Lenina meditsinskiy institut.

RUBTSOV, I.V.

History of the study of anthrax in Russia. Zhur.mikrobiol.,epid.  
i immun. 41 no.5:152-154 My '64. (MIRA 18:2)

I. Kafedra infektsionnykh bolezney I Moskovskogo ordena Lenina  
meditsinskogo instituta imeni Sechenova.

ORTNER, A.B., inzh.; RUBTSOV, I.V.

Removal of rock during the mining of inclined workings with the help of the "Prokhodchik" machine. Shakht.stroi. 9 no.4:23-24 Ap '65. (MIRA 18:5)

1. Kombinat Kuzbasshakhtstroy (for Ortner). 2. TSentral'nyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut podzemnogo i shakhtnogo stroitel'stva (for Rubtsov).

RUBTSOV, I.V.

Clinico-immunological parallels in typhoid fever patients  
treated with levomycetin. Sovet. med. 27 no.6:76-82 Je'63  
(MIRA 17:2)

1. Iz kliniki infektsionnykh bolezney ( zav. - prof. K.V.  
Bunin ) I Moskovskogo ordena Lenina meditsinskogo instituta  
imeni I.M.Sechenova.

HUBTSOV, Ivan Yefimovich

[Regularity of scientific and technological progress under socialism] Zakonomernosti nauchno-tekhnicheskogo progressa pri sotsializme. Moskva, Znanie, 1960. 46 p. (Vsesoiuznoe obshchestvo po rasprostraneniu politicheskikh i nauchnykh znanii. Ser.2, Filosofiia, no.5). (MIRA 13:7)  
(Technology)

ZYKOV, A.I.; MAKHNEJKO, L.A.; OSTROVSKIY, Ye.K.; DEM'YANENKO, G.K.;  
KONONENKO, S.G.; RUBTSOV, K.S.; KRAMSKOI, G.D.; MUFEL', V.B.

Determination of the optimum frequency of a traveling-wave  
linear accelerator and a study of the frequency dependence  
of the energy of accelerated particles. Zhur. tekhn. fiz. 33  
no.6:739-742 Je '63. (MIRA 16:6)

1. Fiziko-tehnicheskiy institut AN UkrSSR, Khar'kov.  
(Particle accelerators)

L 13045-63 EMT(1)/BDS/EEG(b)-2 AFFTC/ASD/ESD-3 LJP(C)  
ACCESSION NR: AP3001335 S/0057/63/033/006/0735/0738

AUTHOR: Ostrovskiy, Ye. K.; Zykov, A. I.; Kononenko, S. G.; Makhenko, L. A.; Dem'yanenko, G. K.; Manovets, Yu. A.; Rubtsov, K. S.

TITLE: Investigation of a shaping section with constant phase velocity for wave propagation (p 3)

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 33, no. 6, 1963, 735-738 (p 2)

TOPIC TAGS: electronics, linear accelerators

ABSTRACT: The axial motion of electrons in a loaded waveguide in which the phase velocity for wave propagation is constant along its length was calculated by the method of J. Swiharta and E. Akeley (J. Appl. Phys., 24, 5, 1953). The waveguide is intended to be the initial section of an electron linear accelerator. The calculations were performed for a section 83 cm long excited to an electric field strength of 67.5 kV/cm and with the electrons injected at an energy of 80 keV. The results are displayed as a family of curves giving the exit electron energy as a function of the entrance phase for different values of the phase velocity from 0.91c to 0.99c. From these results, and taking into account the resolving power of a specific magnetic analyzer, the average energy of the electrons at maximum current in the bunch and the current at maximum density  
Card 1/2

L 13045-63

ACCESSION NR: AP3001335

were calculated as functions of the phase velocity. These calculated results do not agree with the experimental data. The experimental data indicate that capture and acceleration occur in a much narrower range of phase velocities. The divergence between experiment and the calculations is ascribed to end effects in the input junction, which is an H sub 10 to E sub 01 transformer similar to the Stanford variant. The effect of putting inserts in the final waveguide cavity at the junction wall was investigated, and an insert that greatly improves the operation was found. The authors do not consider such inserts to be a satisfactory solution, however, owing to their deleterious effect on the electric strength and because of the analytical complications they involve. Orig. art. has: 7 formulas and 3 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN USSR, Khar'kov (Physical-Technical Institute, AN USSR)

SUBMITTED: 21May62

DATE ACQ: 01Jul63

ENCL: 00

SUB CODE: 00

NO REF Sov: 001

OTHER: 005

Card 2/2

ACCESSION NR: AP3001336

S/0057/63/033/006/0739/0742  
*(3)*

AUTHOR: Zykow, A. I.; Makhnenko, L. A.; Ostrovskiy, Ye. K.; Dem'yanenko, G. K.; Kononenko, S. G.; Rubtsov, K. S.; Kremskoy, G. D.; Mufel', V. B.

TITLE: Determination of the optimum frequency of a linear traveling-wave accelerator and investigation of the dependence of accelerated-particle energy on frequency

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 33, no. 6, 1963, 739-742

TOPIC TAGS: traveling-wave linear accelerator, phase velocity, group velocity accelerator, traveling-wave accelerator, linear accelerator

ABSTRACT: Simplified calculations of phase and group velocities of a traveling-wave linear accelerator using a septate waveguide section are suggested. These are based on the fact that in the case of small waveguide mismatch, i.e., when the VSWR is less than or equal to 1.1, it is possible to derive formulas for these respective parameters by applying the method of shifting the locations of VSWR minima by moving a shorting stub. This eliminates the need to plot complex circular diagrams. Since actual waveguides contain some inhomogeneities, it is necessary to average the standing-wave minimum displacements resulting from translation of the stub in the septate waveguide. The phase-velocity formula is

Card 1/3

ACCESSION NR: AP3001336

obtained by measuring the total linear displacement of the standing-wave minimum during the travel of the stub for the total number of resonators. This formula defines the dependence of phase velocity on frequency. Measurements made by this method for a septate waveguide with type  $\pi/2$  oscillations, a source frequency stability of  $10^{-7}$ , and a septate waveguide period equal to  $2.677 \pm 0.001$  cm showed that for a phase velocity equal to light velocity a frequency of 2796.58 Mc represents the optimum frequency for this waveguide. A straightforward calculation from the phase-velocity formula yields the corresponding group velocity. As regards the dependence of accelerator output on frequency, it is assumed that random deviations of phase velocity are insignificant and that the whole of the waveguide is homogeneous. From this a formula for kinetic energy as a function of frequency is derived. For the waveguide described the relative kinetic energy decreases by a factor of approximately 10 for a frequency change from 2796.6 to 2799 Mc. It is concluded that for septate waveguides with small inhomogeneities the method described determines optimum frequency, and phase and group velocities with adequate accuracy for practical purposes, since the maximum relative error does not exceed  $\pm 0.01\%$ . Orig. art. has: 3 figures and 8 formulas.

ASSOCIATION: Fiziko-tehnicheskiy institut, AN SSSR, Khar'kov (Physicotechnical Institute, AN SSSR)

Card 2/3

"APPROVED FOR RELEASE: 08/22/2000

CIA-RDP86-00513R001445820020-5

ACCESSION NR: AP3001336

SUBMITTED: 21May62

DATE ACQ: 01Ju163

ENCL: 00

SUB CODE: NS

NO REF SOV: 001

OTHER: 004

Card 3/3

APPROVED FOR RELEASE: 08/22/2000

CIA-RDP86-00513R001445820020-5"

OSTROVSKIY, Ye.K.; ZYKOV, A.I.; KONONENKO, S.G.; MAKHNENKO, L.A.;  
DEM'YANENKO, G.K.; MANOVETS, Yu.N.; RUBTSOV, K.S.

Study of a forming section with a wave of constant phase  
velocity. Zhur. tekhn. fiz. 33 no.6:735-738 Je '63.  
(MIRA 16:6)

1. Fiziko-tehnicheskiy institut AN UkrSSR, Khar'kov.  
(Wave guides)

1. RUBTSCV, L. I.
2. USSR (600)
4. National Parks and Reserves - Ukraine
7. Decorative aspect of the "Trostianets" park., Biul.Glav.Eot.sada., No. 11, 1952.
9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

RUBTSOV, L. I.

Longevity of ornamental trees and shrubs. Kiev, Akademicheskij Ukrains'koi SSR, 1953.

51p.

1. Plants, Ornamental.

RUBTSOV, L.I.

Longevity of ornamental trees. Biul.Glav.bot. sada no.18:41-48  
'54. (MIRA 8:3)

1. Botanicheskiy sad Akademii nauk Ukrainskoy SSR.  
(Plants, Ornamental)

RUBTSOV, Leonid Ivanovich, BARBARICH, A.I., kandidat biologicheskikh nauk,  
otvetstvennyy redaktor; SHILO, V.N., redaktor izdatel'stva;  
ROZENTSVEYG, Ye.N., tekhnicheskiy redaktor

[Garden and park landscape] Sadovo-parkovyi landshaft. Kiev,  
Izd-vo Akademii nauk USSR, 1956. 210 p. (MLRA 10:1)  
(Landscape gardening)

RUBTSOV, Leonid Ivanovich; VOLKOV, Ye.V. [translator]; SOKOLOV,  
I.A., red.

[Trees and shrubs in landscape architecture] Dereva ta  
kushchi v landshaftnii arkhitekturi. Kyiv, Budivel'nyk,  
(MIRA 19:1)  
1965. 118 p.

GUZENKO, T.G. [Huzenko, T.H.], kand. arkhitektury; LARKINA, O.M.,  
arkh.; RODICHKIN, O.M. [Rodychkin, O.M.], kand. arkh.;  
SALATICH, A.K. [Salatich, A.K.], kand. arkh.; SVIDERSKIY,  
V.M. [Sviders'kyi, V.M.], kand. arkh.; SEVERIN, S.I., arkh.;  
RUBTSOV, L.I., doktor biol. nauk, prof.; PLOTNIKOVA, T.V.,  
kand. biol. nauk; KATONINA, Ye.I., doktor arkh., prof., red.;  
ZASLAVSKAYA, T.M. [Zaslavs'ka, T.M.], red.; KIYANICHENKO, N.S.  
[Kyianichenko, N.S.], red.; USHCHENKO, N.S., red.; ZELENKOVA,  
Ye.Yu., tekhn. red.; BABIL'CHANOVA, G.O. [Babil'chanova, H.O.],  
tekhn. red.

[Flowers in city landscaping] Kvitkovye oformleniya mist'; al'bom.  
(MIRA 17:1)  
Kyiv, Derzhbudvydav URSR, 1962. 158 p.

1. Akademiya budivnytstva i arkhitektury URSR. Instytut misto-  
budivnytstva. 2. Sotrudnik sadovo-parkovogo khozyaystva No.3  
goroda Kyewa (for Plotnikova), 3. Zavedyushchiy dendrolo-  
gichnym otdelom TSentral'nogo respublikanskogo botanicheskogo  
sada AN Ukr.SSR (for Rubtsov).

KONDRATYUK, Ye.M. [Kondratiuk, I.E.M.], otv. red.; ZOSIMOVICH, V.P. [Zosimovich, V.P.], red.; MAKAREVICH, V.A. [Makarevych, V.A.], red.; POPOV, V.P., red.; ~~FUERTSOV, L.I.~~, red.; SOKOLOVSKIY, O.I. [Sokolov's'kyi, O.I.], red.; IL'KUN, G.M. [Il'kun, H.M.], red.; KOKHNO, M.A., red.; ANDRIYCHUK, M.D. [Andrii-chuk, M.D.], red. izd-va; TURBANOVA, N.A., tekhn. red.

[Biological problems of acclimatized plants] Pytannia biologii aklimatyzovanykh roslyn. Kyiv, 1963. 90 p. (MIRA 16:7)

1. Chlen-korrespondent AN Ukr.SSR (for Zosimovich).  
(Ukraine—Plant introduction)

RUBTSOV, L.I.

Arboretum of the Botanical Garden of the Ukrainian Academy of  
Sciences. Biul. Glav. bot. sada no. 38:3-8 '60. (MIRA 14:5)

1. Botanicheskiy sad AN USSR, Kiyev.  
(Kiev—Arboretums)

RUBTSOV, L. I.

Old parks in Vinnitsa Province. Trudy Bot.sada AN URSR 6:  
(MIRA 13:5)  
106-113 '59.  
(Vinnitsa Province--Parks)

MISNIK, Gevriil Yevmeniyevich [Mysnyk, H.IE.]; RUBTSOV, L.I., doktor  
biolog.nauk, otv.red.; KOVAL', V.A., red.izd-va; KADASHEVICH, O.O.,  
tekhn.red.

[The Trostyanets' Arboretum] Trostianets'kyi dendrologichnyi  
park. Kyiv, Vyd-vo Akad.nauk UkrSSR, 1960. 82 p. (MIRA 13:8)  
(Ichnya District--Arboretums)

RUBTSOV, L.I.

Notable oak specimens in the Crimea. Biul.Glav.bot.sada  
(MIRA 13:2)  
no.35:117-119 '59.

1. Botanicheskiy sad AN USSR.  
(Crimea--Oak)

RUBTSOV, L.I.

Remarkable parks of Vinnitsa Province. Biul. Glav. bot. sada no.33:  
(MIRA 12:10)  
38-43 '59.

1. Botanicheskiy sad Akademii nauk Ukrainskoy SSR.  
(Vinnitsa Province--Parks)

RUBTSOV, L.I., doktor biol. nauk

Remarkable individual oaks in the Crimea. Priroda 48 no.6:114  
(MIREA 12:5)  
Je '59.

1.Botanicheskiy sad AN USSR, Kiyev.  
(Crimea--Oak)

RUBTSOV, Leonid Ivanovich.

Botanical Garden, Acad Sci USSR,. Academic degree of Doctor of Biological Sciences, based on his defense, 1 December 1954, in the Council of Botanical Inst imeni Komarov, Acad Sci USSR, of his dissertation entitled: "Biological Bases for the Creation of a Horticultural-Park Landscape."

Academic degree and/or title: Doctor of Sciences

SO: Decisions of VAK, List no. 11, 14 May 55, Byulleten' MVO SSSR,  
No. 15, Aug 56, Moscow, pp. 5-24, Uncl. JPRS/NY-537

"APPROVED FOR RELEASE: 08/22/2000

CIA-RDP86-00513R001445820020-5

HUBTSOV, L.I.

Landscape composition and vegetation of the Trostyanets Arboretum.  
(MLRA 10:8)  
Trudy Bot. sada AN URSR 1:66-77 '49.  
(Trostyanets (Sumy Province)--Arboreta)

APPROVED FOR RELEASE: 08/22/2000

CIA-RDP86-00513R001445820020-5"

"APPROVED FOR RELEASE: 08/22/2000

CIA-RDP86-00513R001445820020-5

RUBTSOV, L.N.; KOLMAKOV, V.M.; BIBARSOV, R.Sh.

Radar observations of Perseids on August 8-16, 1956.  
Biul.Stal.astron.obser. no.19:35-37 '57. (MIRA 13:3)

(Metors--August)

APPROVED FOR RELEASE: 08/22/2000

CIA-RDP86-00513R001445820020-5"

RUBTSOV, L.N.

Radar observations of meteors at the Stalinabad Observatory.  
(MIRA 11:7)  
Biul. Stal. astron. obser. no. 22/23:63-64 ('57.  
(Meteors) (Radar in astronomy)



3,1230  
3,2440  
AUTHORS:  
TITLE:  
SOURCE:

Babadzhanov, P.B., Batiarev, A.M. and Rubtsov, L.N.  
43287  
S/831/62/000/008/008/016  
E032/E514  
Meteor observations at Dushanbe

Ionosfernnye issledovaniya (meteor). Sbornik statey,  
no.8. V razdel programmy MGG (ionosfera). Mezhdunved.  
geofiz. kom. AN SSSR. Moscow, Izd-vo AN SSSR, 1962,  
56-63

TEXT: The Institut astrofiziki Akademii nauk Tadzhikskoy SSR (Institute of Astrophysics, Academy of Sciences, Tadzhik SSR) has carried out photographic, visual and radar meteor observations in accordance with the IGY programme. The photographic programme involved: 1) the study of the altitude, velocity and brightness of meteors with a view to determining the upper layers of the atmosphere at 60-120 km above sea level; 2) comparison of these parameters with other data, e.g. rocket data so as to determine their seasonal variation, and 3) study of meteor radiants and orbits. The photography was carried out from two points separated by 1569 m. Each point was equipped with seven HAFA 3c/25 (NAFA 3s/25) cameras with (YUZNI-Q (Uran-Q) objectives.

Card 1/3

Meteor observations at Dushanbe

S/831/62/000/003/003/016  
E052/E51t

Objective diameter 10 cm, focal length 25 cm, frame size 18 x 24 cm). The angular range of each point was 60° from zenith, and each set of cameras was set up on an adjustable base controlled by a clock mechanism, so that star images remained stationary relative to the film. A special rotating shutter was used in front of the cameras at one of the points. All the observations were carried out on clear moonless nights using 30 min exposures at 10 min intervals. Between July 1, 1957 and December 31, 1958, 815 exposures were made. The visual observations of meteors and meteor trails were carried out with IGY-programme instructions. They were made in parallel with radar observations in June-September, 1958 but were not very extensive. In addition, observations of the Geminids were carried out on December 14-15, 1958 in accordance with the Czechoslovak programme. Altogether in 1957 and 1958, 127.7 hours were spent in observations of meteor trails and 96.9 hours were spent in observing telescopic meteors. The radar observations were made at 4.11 m (72.98 Mc/sec) at a pulse repetition frequency of 50 cps (pulse length 10  $\mu$ sec, power per pulse 50-70 kW). The nine-element antenna was at 22° above the horizon, facing west. The

Card 2/3

Meteor observations at Dushanbe

S/831/62/000/008/008/016

E032/E514

minimum range was 120 km (shorter ranges were cut out by the presence of mountains). A calendar of the radar observations is reproduced. There are 2 tables.

Card 3/3

ACC NR: AR6028757

SOURCE CODE: UR/0269/66/000/006/0053/0053

AUTHOR: Rubtsov, L. N.

TITLE: The use of an ionospheric station for the observation of ionized meteor trails

SOURCE: Ref. zh. Astronomiya, Abs. 6.51.425

REF SOURCE: Byul. Komis. po kometam i meteoram Astron. soveta AN SSSR, no. 10, 1965,  
38-48

TOPIC TAGS: meteor trail, ionospheric electron density, ionospheric physics

TRANSLATION: Some advantages of observing meteorite trails at an ionospheric station as compared to the radar method are described: the wide range of frequencies (7 to 20 megacycles), the narrow discrimination band of the receiver (15 kilocycles), the considerable length of the radiated pulse of the transmitter ( $100 \mu\text{sec}$ ), and the low radiation frequency which permits the registration of electron concentrations in a meteorite trail of approximately  $10^9$  to  $10^{10}$  electron/cm. The separate photographic subassembly used for the recording of meteorite trails registers the number, distance and duration of meteorite echos as well as the amplitude-frequency characteristics of fading when the radio waves are reflected from the meteorite trail. There are substantial differences in the evaluation of the observation results as compared to stations equipped with radar. The curves  $N = N(\tau)$  have maxima and the radar curves have exponents. The

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maximum reflection frequencies from the E<sub>s</sub> ionospheric layer of the f-type during the maximum periods of the Ursids (or shower) reached 10 megacycles; usually, they are only 3 to 4 megacycles. 7 references.

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AUTHOR: Rubtsov, I.M.

TITLE: Results of vertical sounding of the ionosphere above Tadzhikistan in 1962

SOURCE: Ref. zh. Geofizika, 'ts. 6411

CITED SOURCE: Byul. In-ta astrofiz. AN TadzhSSR, no. 38, 1964, 3-31

TOPIC TAGS: ionospheric sounding, ionogram, ionosphere, E layer, E sub 2 layer, F sub 1 layer, F sub 2 layer, electron concentration, upper atmosphere, vertical sounding

ABSTRACT: Yearly results of the processing of ionograms obtained at the ionospheric station of the Institute of Astrophysics, AS Tadzhik SSR, 1962, are cited. On the basis of an analysis 40.000 ionograms, a study was made of the basic